



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,400	05/08/2007	Ray Andrew Simpkin	0074-543426	3733

110 7590 04/29/2009
DANN, DORFMAN, HERRELL & SKILLMAN
1601 MARKET STREET
SUITE 2400
PHILADELPHIA, PA 19103-2307

EXAMINER

FONTENOT, NIGEL RAI

ART UNIT	PAPER NUMBER
----------	--------------

3768

MAIL DATE	DELIVERY MODE
-----------	---------------

04/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,400	Applicant(s) SIMPKIN, RAY ANDREW	
	Examiner NIGEL FONTENOT	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/1/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/8/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to the application filed June 1, 2006. Applicant's preliminary amendment filed June 1, 2006 has been entered. Claims 1-33 are pending.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 23-33 are directed to a computer program for performing different steps. Claims to computer data structures and programs are not statutory subject matter under 35 U.S.C. 101, as being directed toward subject matter ineligible for patenting. See MPEP 2106 IV B 1(a). Computer program claims must be embedded on a computer readable medium. A claim to a tangible computer-readable medium encoded with a computer data structure or program is eligible statutory subject matter, i.e. it is one of the four categories of enumerated subject matter, because it is a computer element which defines structural and functional interrelationships between the computer program and other components of a computer which permit the computer program's functionality to be realized.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al. (US 2006/0084859).

4. Addressing claims 1, 12, and 23, Johnson discloses a system that implements a method stored on a computer-readable medium for generating a three-dimensional radar image of a body part having multiple image points comprising (see fig. 7, para 7, para 27, para 349, and para 495): an input for receiving input data comprising: radiation information obtained at an array of scan locations relative to the body part, the radiation information being obtained at multiple microwave frequencies at each of the scan locations; surface profile information relating to the body part; and estimates of body part properties (see paras 5, 345, 361, 371, 407, 524-527); a processor arranged to process the input data to construct each image point by: determining the minimum optical paths between each scan location and the image point based on the scan locations, surface profile information and body part properties; phase-shifting the radiation information based on the minimum optical paths to equalize the radiation information; and then summing the equalized radiation information over all scan

Art Unit: 3768

locations and all frequencies to provide a value for the image point (see paras 5, 7, 144, 182, 343-344, and 416-419); and an output for sending output data relating to the image point values for the generation of the 3D radar image of the body part (see para 431).

5. Addressing claims 2-4, 13-15, and 24-26, Johnson discloses wherein the body part is a human breast and the body part properties comprise: estimates of the thickness and dielectric constant of dielectric interfaces of the body part between the scan locations and the image point; estimates of the dielectric constant of the body part in the vicinity of the image point; estimates of the thickness and dielectric constant of the skin dielectric interface including the breast; and the dielectric constant of the breast tissue (see paras 5, 126, 171, 406-408, and claim 26).

6. Addressing claim 5, 16, and 27, Johnson discloses wherein the processor is arranged to determine the minimum optical paths between each scan location and the image point being constructed by mapping the valid optical paths between each scan location and the image point using Snell's Law of Refraction and selecting the minimum optical path from the valid optical paths (see para 171 and process in fig. 7).

7. Addressing claims 6-7, 17-18, and 28-29, Johnson discloses using radar beams and radar beam forming to perform the above method as well as a radar output display that receives the output data and displays the image (and paras 351, 373, 383, and 405-407).

8. Addressing claims 8-11, 19-22, and 30-33, Johnson discloses wherein the radiation information is obtained at each scan location at least 10 multiple discrete frequencies of approximately 10 GHz-18GHz, and at least 100 scan locations relative to the body part (see paras 407 and 524; Johnson's method as above used energy at multiple frequencies including 10Ghz multiple times for microwave imaging, each time at each location being used at 10Ghz multiple times and therefore at least 10 multiple discrete frequencies, not necessarily 10 multiple distinct discrete frequencies).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIGEL FONTENOT whose telephone number is (571)270-7032. The examiner can normally be reached on Monday-Friday (7:00a-4:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3768

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. F./

Examiner, Art Unit 3768

/Long V Le/

Supervisory Patent Examiner, Art Unit 3768